

stryker

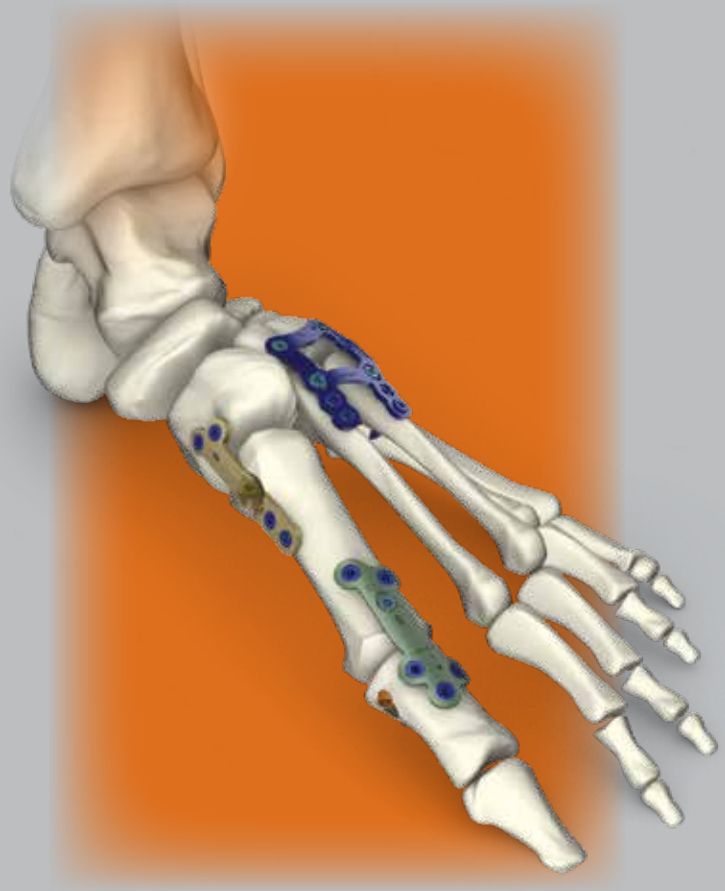
Anchorage®
Plating System

Foot & Ankle

Operative Technique

Anchorage Plate System
- MTP Plates
- Lapidus Plates
- Lisfranc Plates
- Basal Osteotomy Plates
- Utility Plates

Anchorage Cross Plate System
- MTP Cross Plates
- Lapidus Cross Plates



Anchorage

Acknowledgments

Stryker acknowledges the following surgeon for his support in the development of this technique guide:
Keith L. Wapner, M.D.

This publication sets forth detailed recommended procedures for using Stryker devices and instruments. It offers guidance that you should heed, but, as with any such technical guide, each surgeon must consider the particular needs of each patient and make appropriate adjustments when and as required.

⚠ WARNING

- Follow the instructions provided in our cleaning and sterilization guide (OT-RG-1).
- All non-sterile devices must be cleaned and sterilized before use.

⚠ WARNING

Multi-component instruments must be disassembled for cleaning. Please refer to the corresponding assembly/disassembly instructions.

Please remember that the compatibility of different product systems has not been tested unless specified otherwise in the product labeling.

Consult Instructions for Use (www.ifu.stryker.com) for a complete list of potential adverse effects and adverse events, contraindications, warnings and precautions.

The surgeon must advise patients of surgical risks, and make them aware of adverse effects and alternative treatments.

⚠ WARNING

- The patient should be advised that the device cannot and does not replicate a normal healthy bone, that the device can break or become damaged as a result of strenuous activity or trauma and that the device has a finite expected service life.
- Removal or revision of the device may be required sometime in the future due to medical reasons.

⚠ CAUTION

The surgeon should be thoroughly familiar with the intended uses, indications/contraindications, the surgical procedure, instruments and device characteristics as well as the mechanical and material aspects of the external fracture fixation appliances prior to performing surgery.

⚠ WARNING

Fixation Screws:
Stryker Trauma and Extremities bone screws are not approved or intended for screw attachment or fixation to the posterior elements (pedicles) of the cervical, thoracic or lumbar spine.

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Indications and Contraindications

Indications

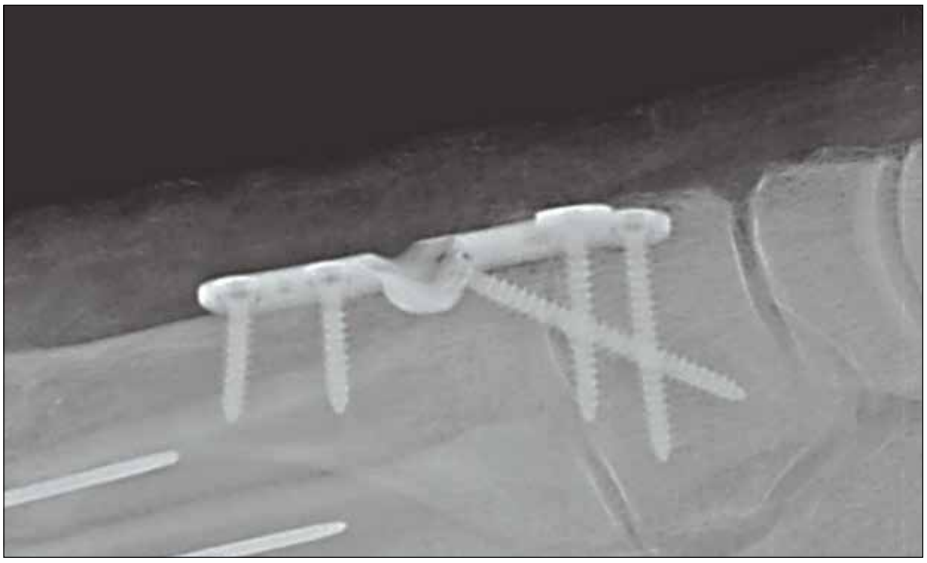
The Anchorage Bone Plating System is indicated for stabilization and fixation of fresh fractures, revision procedures, joint fusion, and reconstruction of small bones in the hands, feet, wrists, ankles, fingers, and toes. The system may be used in adults and pediatric patients.



Contraindications

The following contraindications may be of a relative or absolute nature and must be taken into account by the attending surgeons:

- Acute or chronic infections, local or systemic.
- Surgical procedures other than those mentioned in the Indications section.
- Do not use on patients allergic to the components of the product (Please see Instructions for Use) or having known allergies.
- The combination of this implant with implants of another origin is contraindicated.



⚠CAUTION

The Anchorage Bone Plating System has not been evaluated for safety in the MR environment. It has not been tested for heating or unwanted movement in the MR environment. The safety of Anchorage Bone Plating System in the MR environment is unknown. Performing an MR exam on a person who has this medical device may result in injury or device malfunction.

Overview

Implants

The Anchorage Plating System is comprised of precontoured locking plates.

Examples of Applications:

- 1st Metatarsal Phalangeal Joint Arthrodesis, with or without interpositional bone graft
- Proximal Osteotomy of Metatarsals 1 – 5
- Lapidus Fusion
- Lisfranc Fusion

Features

- Plate Thickness: 1.0 to 1.5mm (plate specific)
- Threaded holes accept either 3.0mm or 3.5mm locking or nonlocking screws. Nonlocking screws can be angulated ± 15° from center
- Plates, screws and instruments color coded for ease of identification
- Plate and Screw Material: TiAl6V ELI

Compression

There are two plate specific options for compression:

- Cross Plate (CP) Design
- Compression Ramp Technology

Anchorage CP



MTP CP Plate **Lapidus CP Plates**

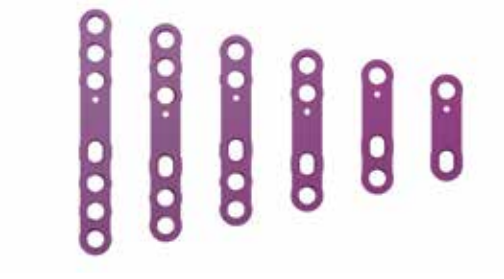
Anchorage System



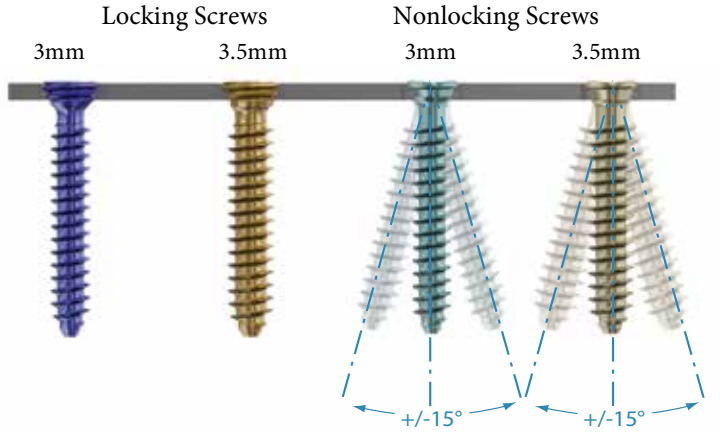
MTP Plates **Lapidus Plates**



Lisfranc Plates **Basal Osteotomy Plates**



Utility Plates



All screws feature Torx heads

⚠ CAUTION

- All threaded holes can accommodate either locking or nonlocking screws (3.0mm and 3.5mm diameter). The compression ramp only accepts 3.0mm nonlocking screws.
- Applying excessive torque during screw insertion is not recommended, and may result in damage to the screw head. In particular for nonlocking screws it is recommended to tighten the screw head until contact with the plate, then release from tightening.

Overview

Instrumentation

One set of ancillaries and screws for all plating systems.

Instruments are color–coded for ease of identification

1. K-Wires/tubes
2. Plate Benders
3. Nonlocking Drill Guide
4. Compression ramp Drill Guide
5. Drill bits
6. Driver tips
7. Depth Gauge
8. Locking Drill Guide
9. Forceps
10. Screwdriver handle
11. Cup / Cone Reamers
12. Ruler
13. Plate Trays
14. Screw Trays
15. Cross Plate (CP) Instrumentation

- Drill Guide bush MTP CP
- Drill Guide bush Lapidus CP
- Drill Guide bush for K-Wire CP
- Polyaxial drill guide bush CP
- CP Reamer
- Templates CP Lapidus & MTP



Drill Guides

1. Drill Guide for Nonlocking 3.0mm Screws (XVIMQ002020)
2. Drill Guide for Nonlocking 3.5mm Screws (XVIMQ002025)
3. Drill Guide for 3.0mm Locking Screws (XVIMQ001020 + XPR002001)
4. Drill Guide for 3.5mm Locking Screws (XVIMQ001025 + XPR002001)
5. Compression Ramp Drill Guide (XVIMQ003021 + XVIMQ003020)
6. Lapidus CP Drill Guide (XVIMQ004025 + XVIMQ003020)
7. MTP CP Drill Guide (XVIMQ005025 + XVIMQ003020)
8. Polyaxial CP Drill Guide (XVIMQ001045 + XVIMQ003020)
9. K-Wire CP Drill Guide (XVIMQ001012 + XPR002001)



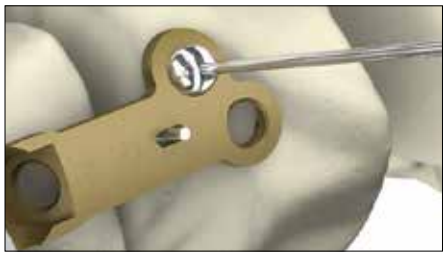
Overview

Kirschner Wire

Standard temporary K-Wires 1.2mm x 70mm (AGK0212070) and Olive K-Wires* 1.2mm x 65mm (XBR001002) are available to stabilize the Anchorage Plates and Anchorage CP Plates over the joints.

*Optional Instrumentation.





Screwdriver Assembly

Pull the handle collar of the Screwdriver Handle and insert the Driver tips T8 AO quick coupling (XTV008001).

The flat surface of the Driver tips needs to align with arrow on the screwdriver handle as pictured.

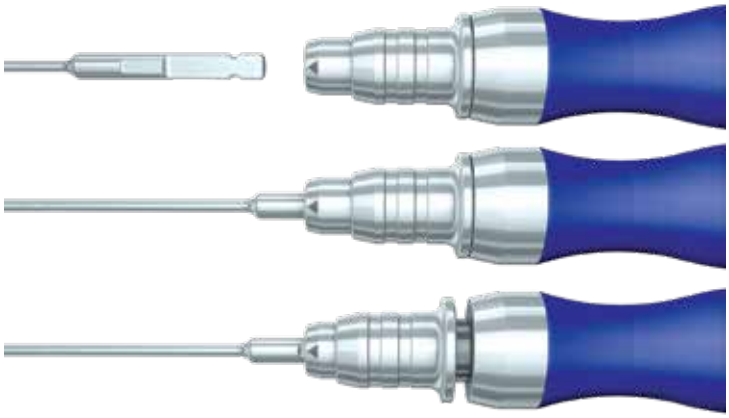


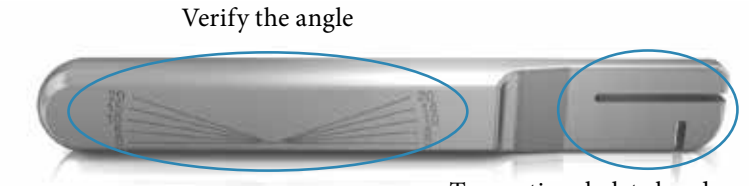
Plate Benders

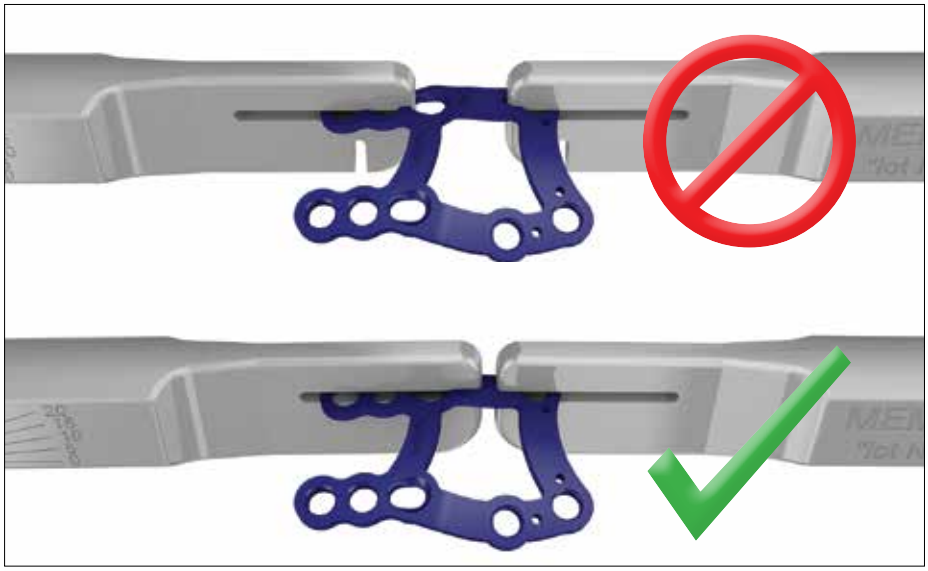
The Anchorage plates are anatomically contoured.

In some cases the Plate Benders (XCA001001) may be required. When utilizing the plate benders, the following guidelines should be adhered to:

⚠CAUTION

- Do not apply on CP Plates.
- Ensure the threaded holes of the plate are not disrupted during bending technique. Plates should only be bent in one direction. Never re-bend plates.





Anchorage Plating System

Anchorage Compression Ramp Technology

The Compression Ramp provides mechanical compression between two corresponding bone segments.

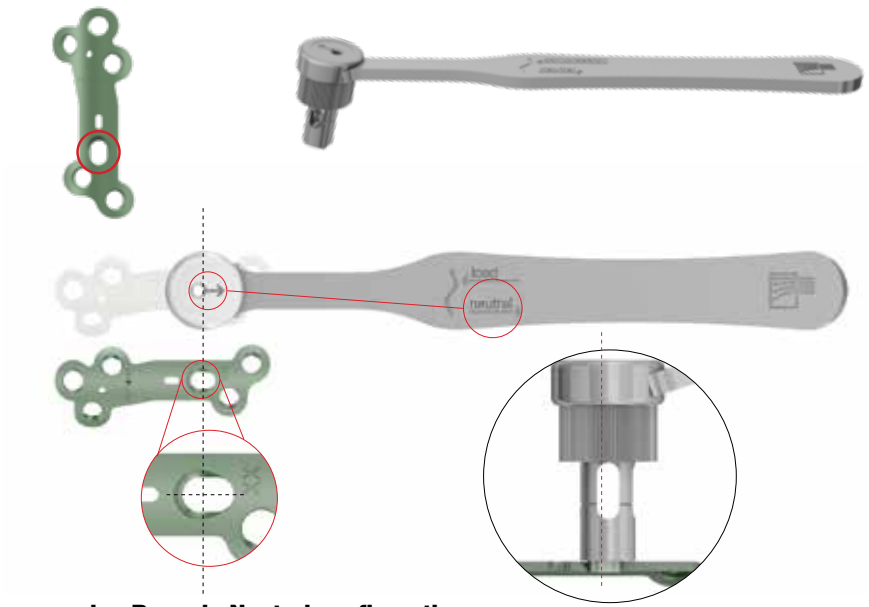
- The Compression Ramp Drill Guide (XVIMQ003020 + XVIMQ003021) has 2 configurations; Load [compressed] and Neutral [non-compressed]. These are defined by the arrows laser etched in the top of the Drill Channel Head and the Handle
- Align the Channel Head and Handle arrows to correctly prepare the Drill Channel for either the Load [compressed] or Neutral [non-compressed] configuration
- Drill through Channel Head using a 2.0mm Drill Bit for a 3.0mm nonlocking screw
- Measure for appropriate screw length using Gauge and insert nonlocking screw

The Compression Ramp generates mechanical compression as the nonlocking screw head is tightened into the elongated screw hole with a graduated depth.

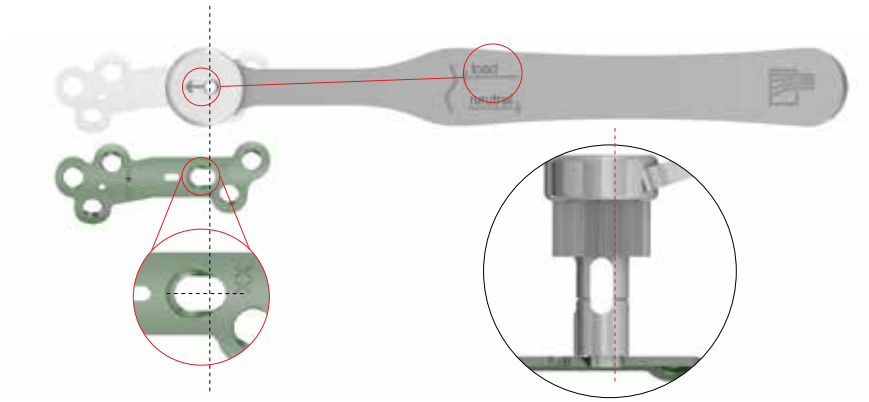
As the screw is tightened, the screw head slides down the ramp, sitting deeper into wider portion of the screw hole, mechanically drawing the two bone segments together.

1.5mm of compression can be achieved using the Compression Ramp.

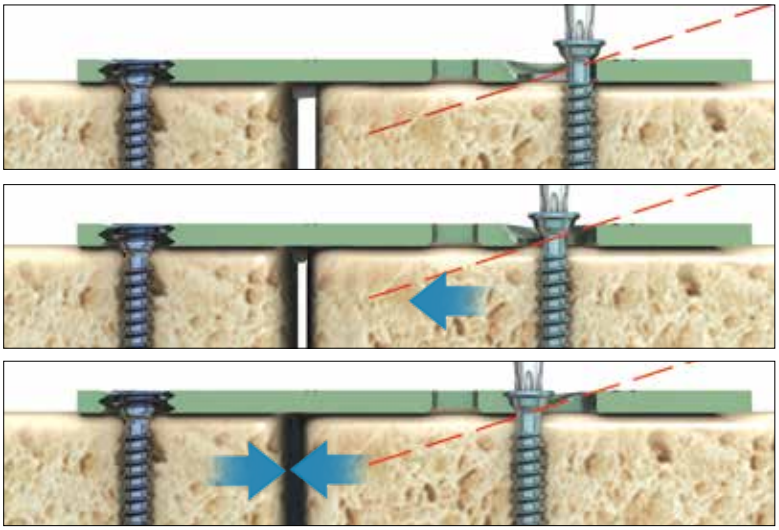
The Compression Ramp only accommodates a 3.0mm nonlocking screw.



Compression Ramp in Neutral configuration



Compression Ramp in Load configuration



1.5mm compression

Anchorage Plating System

MTP Arthrodesis – Operative Technique

The Anchorage MTP Fusion Plates are available in 3 different shapes, with one specific plate allowing revision surgeries (PLP1046X).

• MTP Plate Profile: 1.3mm

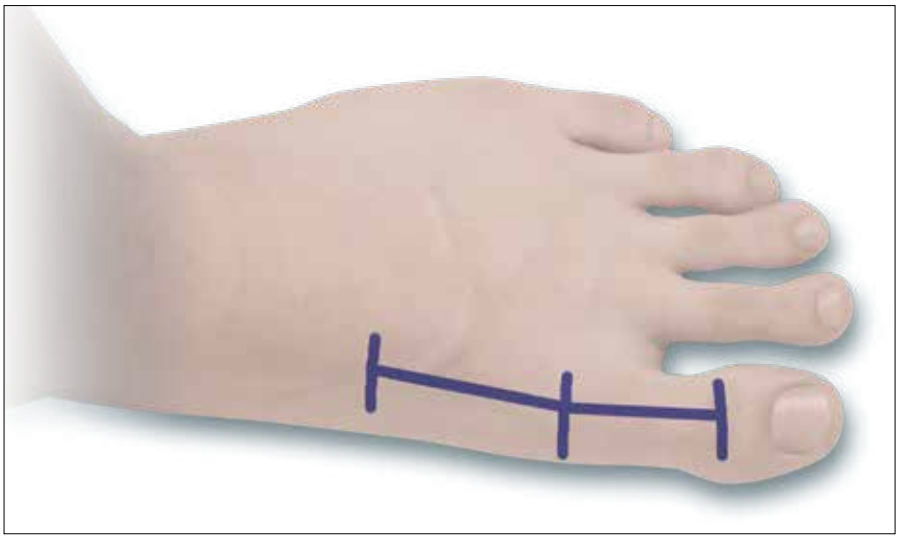


Incision/Exposure

A dorsal longitudinal incision is commonly used for MTP joint exposure. A medial approach may also be considered according to surgeon experience and patient indication.

The incision is deepened and the EHL tendon retracted laterally. The joint capsule is released medial to the EHB tendon and retractors are placed to expose the base of the proximal phalanx and metatarsal head.

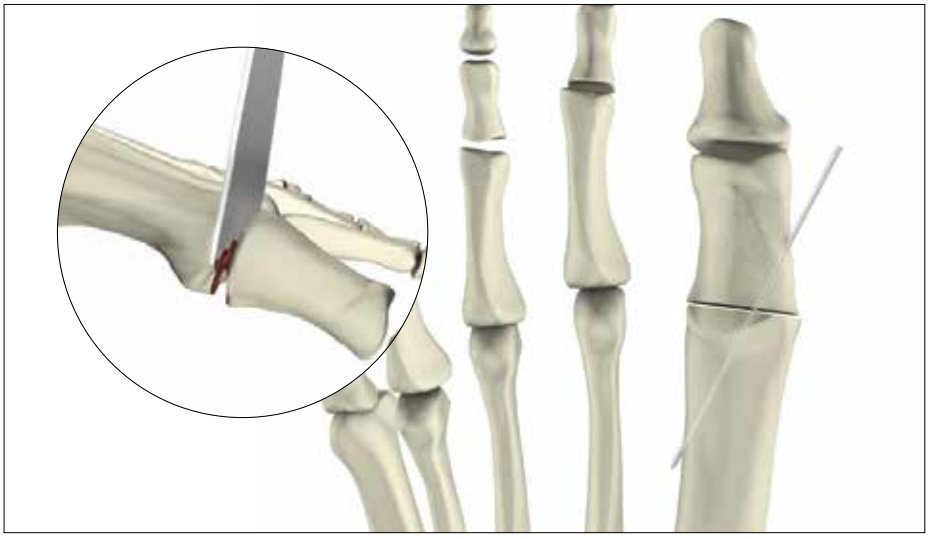
An exostosectomy can be performed if necessary. A simulation of correction (metatarsus varus and pronation) is performed.



Metatarsal Preparation

The amount of bone resection depends upon the desired length of the 1st metatarsal.

Some revision cases will not require extensive resection.



Option 1: Flat cuts technique

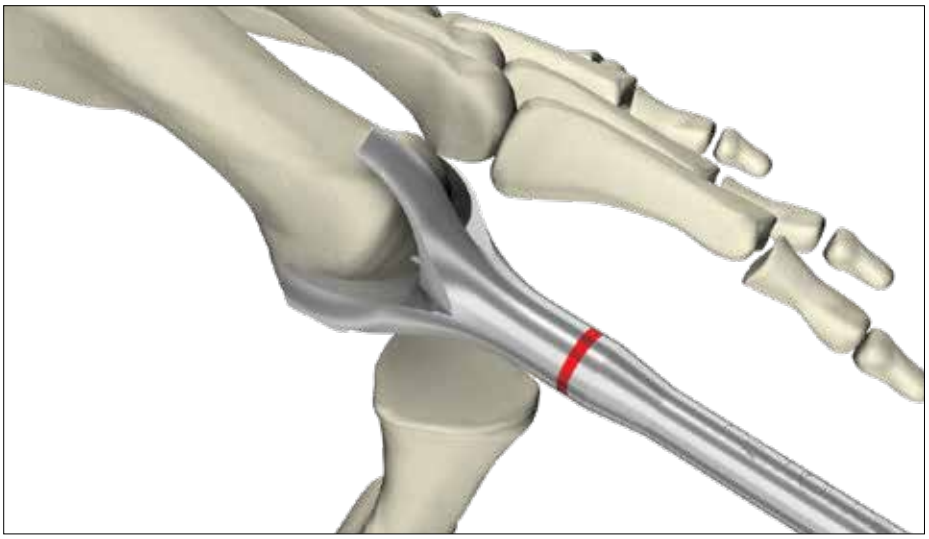
Perform a dorsal approach to expose the metatarsal head and the base of the proximal phalanx. Remove the articular surface of metatarsal head perpendicularly to the shaft. Hold the phalanx in position (15° Valgus; 10-15° Dorsiflexion). Make a parallel cut on proximal phalanx and proceed to the Medial Eminence Removal.

Place a guidewire into the middle of the base of the proximal Phalanx and drive it out distal medial. Reduce the joint and then drive the pin back in a retrograde fashion into the metatarsal shaft for provisional fixation.

MTP Arthrodesis – Operative Technique

Option 2: Cup and Cone Technique

Displace the phalanx plantarly or laterally, according to the approach chosen to expose the metatarsal head. Using a powered drill, place a 1.6mm x 100mm K-Wire (AGK16100) proximally through the center of the metatarsal head and into the diaphysis.



The largest diameter concave reamer (22mm) (XFR004122) is inserted over the K-Wire. Reaming is performed until bleeding subchondral bone becomes visible on the joint surface. To ensure proper sizing, begin by using the largest size concave reamer, and then downsizing to match the diameter of he metatarsal head.

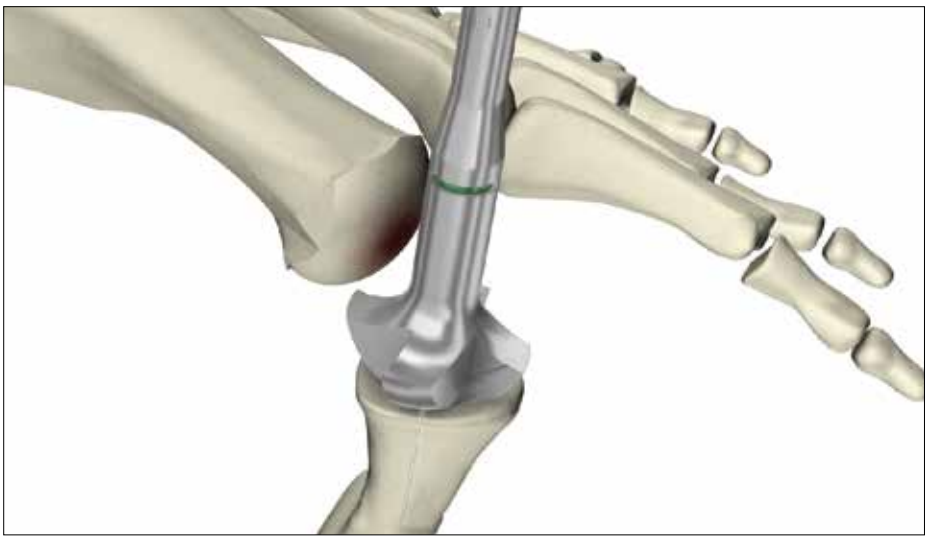
⚠CAUTION

Check the progress of the reamer frequently to prevent excessive shortening of the metatarsal. Take note of the last reamer size used.

Once metatarsal reaming is complete, the K-Wire can be used to elevate the metatarsal head to enable the removal of bone on the plantar aspect.

Phalangeal Preparation

The proximal phalanx is plantarflexed using a curved McGlamry or Hohmann Retractor. A 1.6mm x 100mm K-Wire is inserted into the center of the articular cartilage and directed through the diaphysis. Care should be taken not to penetrate the interphalangeal joint.



Reaming is initiated using the smallest size convex reamer (14mm) (XFR004214) inserted over the K-Wire. Progressively increase the diameter of reamer used until the proximal phalanx is prepared with the same diameter utilized to prepare the metatarsal. If the metatarsal reaming stopped at 18mm, the last and largest reamer used on the phalanx will be 18mm.

⚠CAUTION

The metatarsal head should be protected when reaming the proximal phalanx.

MTP Arthrodesis – Operative Technique

Stabilization/Plantar Compressive Screw Insertion

The cup and cone shaped surfaces can be aligned in the desired position. Rotate the surfaces and set the dorsiflexion and valgus angles.

Proper positioning can be evaluated by placing a support against the plantar surface of the foot.

Once the desired position has been achieved, drive a K-Wire 1.6mm x 150mm (AGK16150) from the mid portion of the base of the proximal phalanx distally out the medial side. Then reduce the joint and drive it back in a retrograde fashion into the metatarsal for provisional fixation.

According to surgeon preference, a cannulated or solid screw can then be inserted across the plantar aspect of the MTP joint.

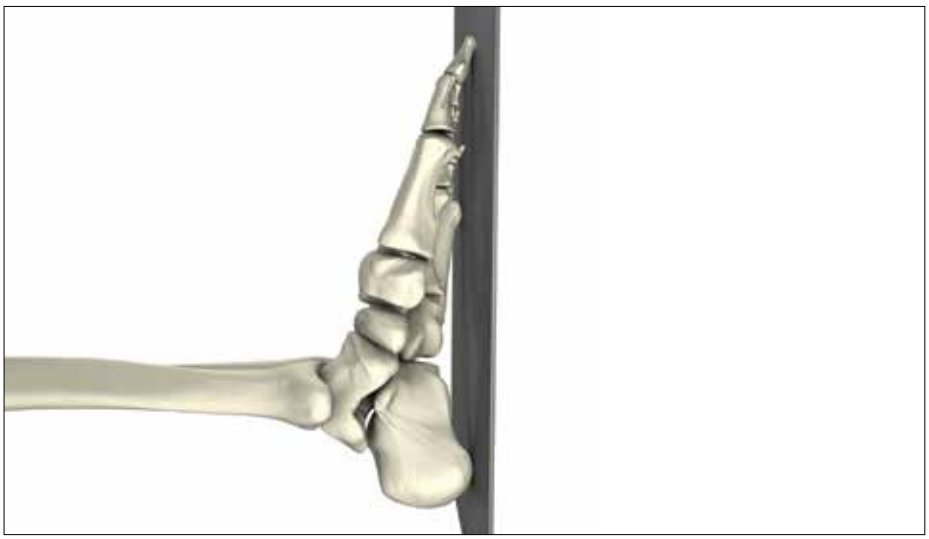
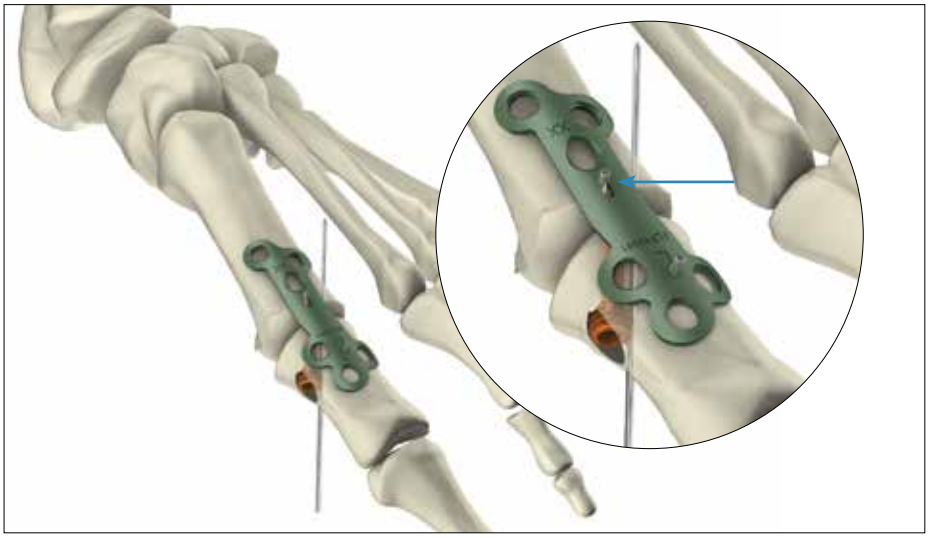


Plate Selection

With the joint now stationary, the plate should be placed over the joint and evaluated. This evaluation should determine the degree of bend (if any) desired.

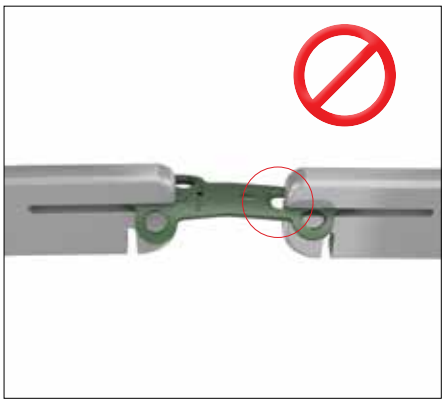
Plate Benders (XCA001001) can be used to bend the plate if necessary.

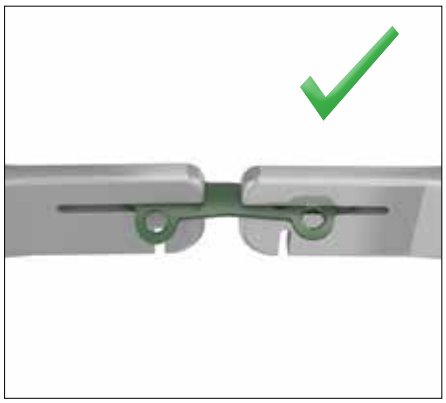
The plate should then be positioned over the joint and held in place with K-Wires 1.2mm x 70mm (AGK0212070) (see blue arrow).



⚠ CAUTION

Ensure the threaded holes of the plate are not disrupted during bending technique. Plates should only be bent in one direction. Never re-bend plates.





MTP Arthrodesis – Operative Technique

Distal Screw Insertion

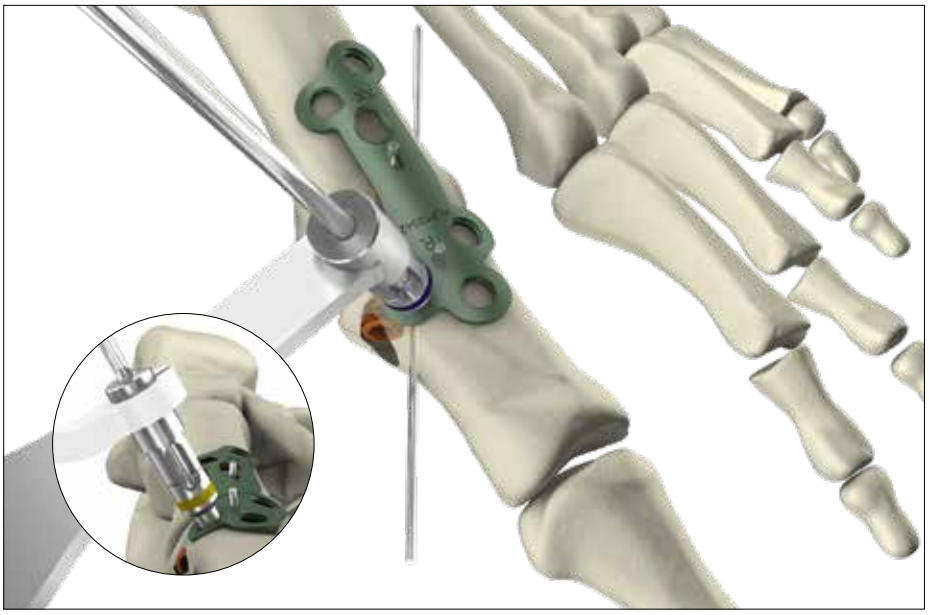
Perform drilling through locking or nonlocking drill guides according to the screw diameter to be utilized.

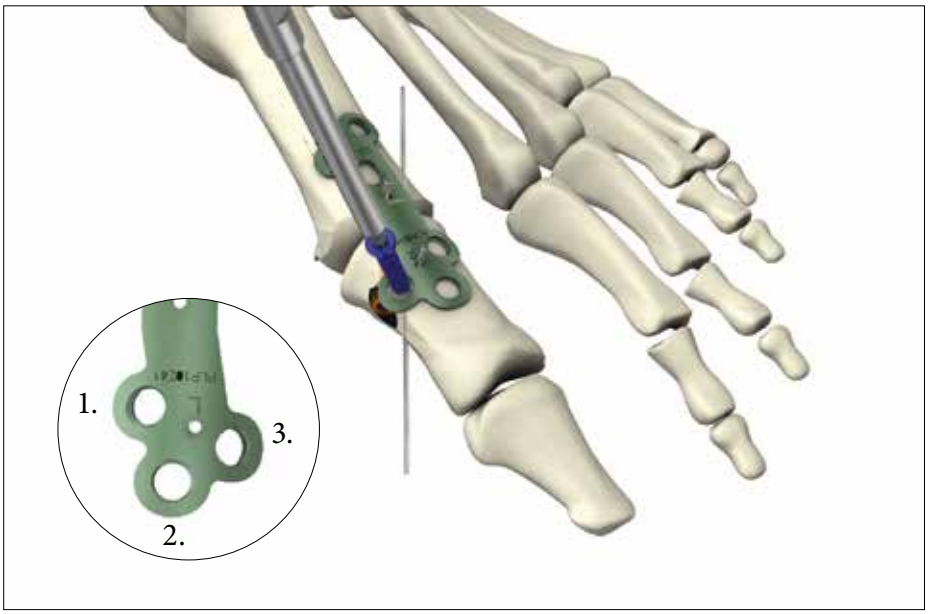
Distal holes can accommodate either locking or nonlocking screws in 3.0mm (blue) or 3.5mm (yellow) diameter. Screws should be placed from medial to lateral.

A 2.0mm Drill Bit (XFO082001) (for 3.0mm screws) or 2.5mm Drill Bit (XFO082501) (for 3.5mm screws) can be used in conjunction with the appropriate drill guide to prepare the hole for screw insertion. Insert screw after determining screw length with the Gauge (XJA002004).

NOTICE

A nonlocking screw can be inserted prior to introduction of locking screws to flush the plate to the bone surface.

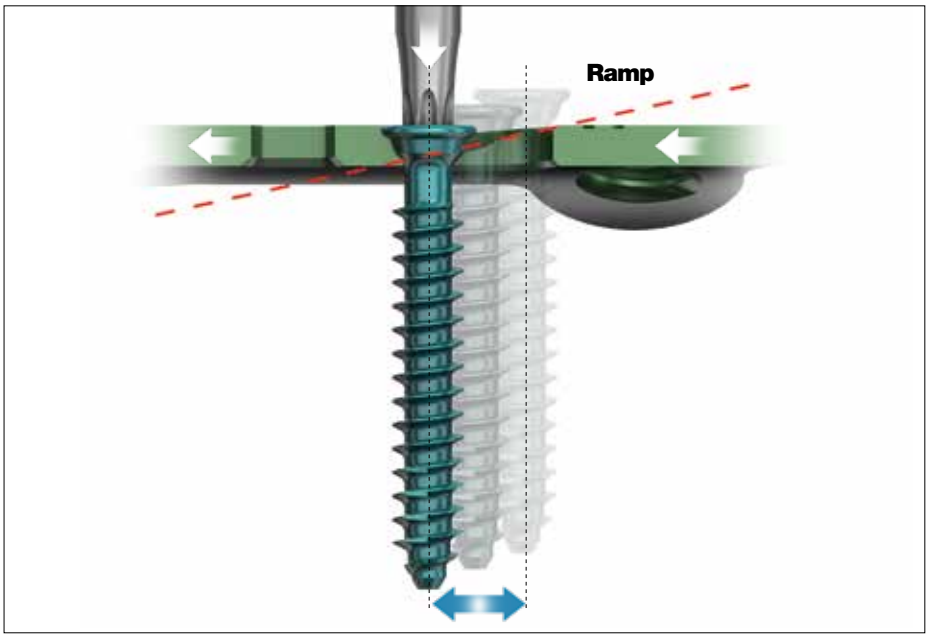




MTP Arthrodesis – Operative Technique

Compression Ramp

Following distal screw insertion, the Compression Ramp (XVIMQ003020 + XVIMQ003021) can be used if compression is desired. Remove the K-Wire before compressing the joint. Refer to page 8 for Compression Ramp Technique.



1.5mm compression



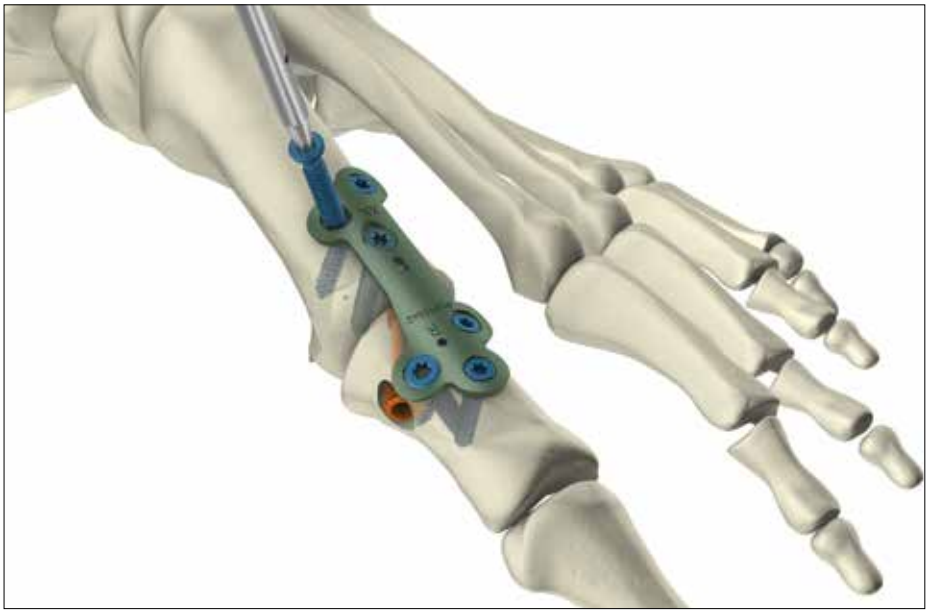


Proximal Screws Insertion

Perform drilling through locking or nonlocking drill guides according to the screw diameter to be utilized.

Proximal threaded holes can accommodate either locking or nonlocking screws in 3.0mm (blue) or 3.5mm (yellow) diameter.

A 2.0mm Drill Bit (XFO082001) (for 3.0mm screws) or 2.5mm Drill Bit (XFO082501) (for 3.5mm screws) can be used in conjunction with the appropriate drill guide to prepare the hole for screw insertion. Insert screw after determining screw length with the Gauge (XJA002004).



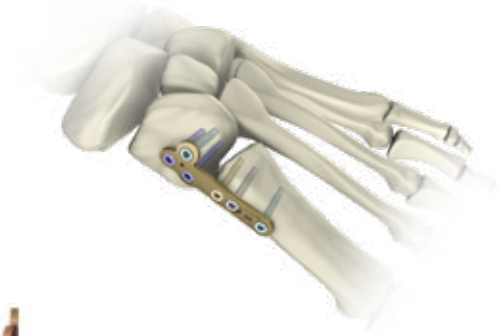
Anchorage Plating System

Lapidus Arthrodesis – Operative Technique

The Anchorage Lapidus Plates are available in Left and Right sides, with 3 step references (0mm, 1mm and 2mm).

The 1mm and 2mm step options are appropriate when step-off is observed during first metatarsal alignment.

• Lapidus Plate Profile: 1.5mm

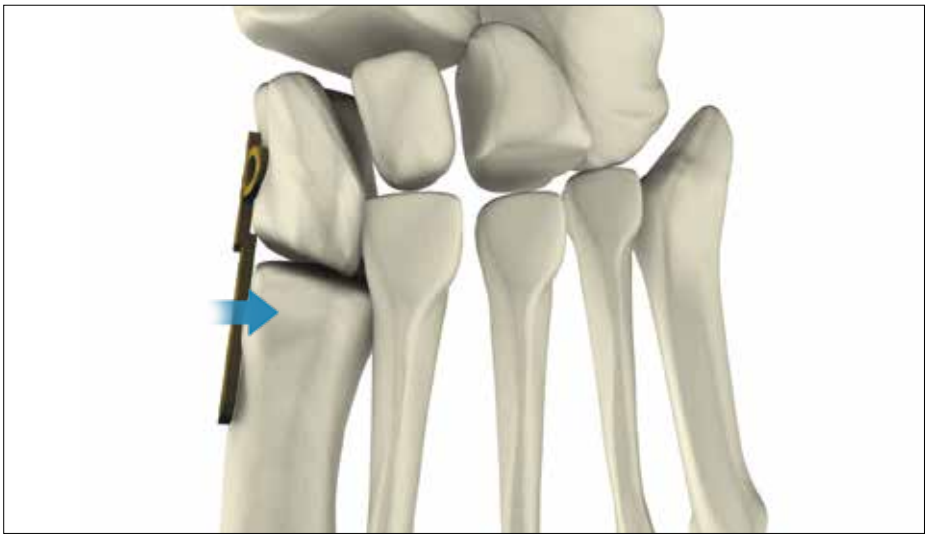


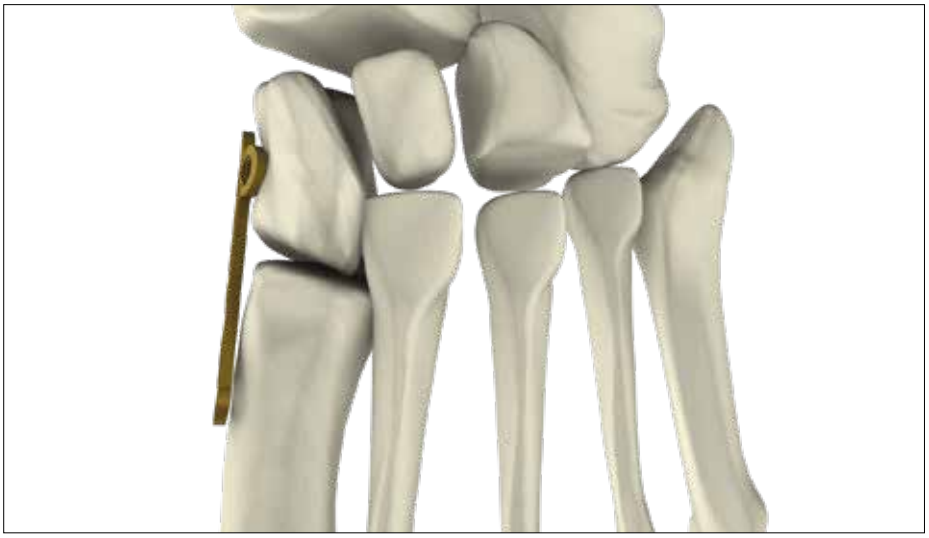


Incision and Joint Preparation

An incision is made over the dorsal medial aspect of the 1st MTC joint. Dissection is carried down through the subcutaneous tissues with care to identify and protect the Anterior Tibial Tendon as it passes along the medial side of the medial cuneiform to insert on the plantar base of the first metatarsal. A dorsal capsulotomy is performed and the joint surfaces are debrided back to bleeding bone.

After the joint preparation, reduce the fragments and temporarily fix using K-Wires 1.6mm x 150mm (AGK16150).



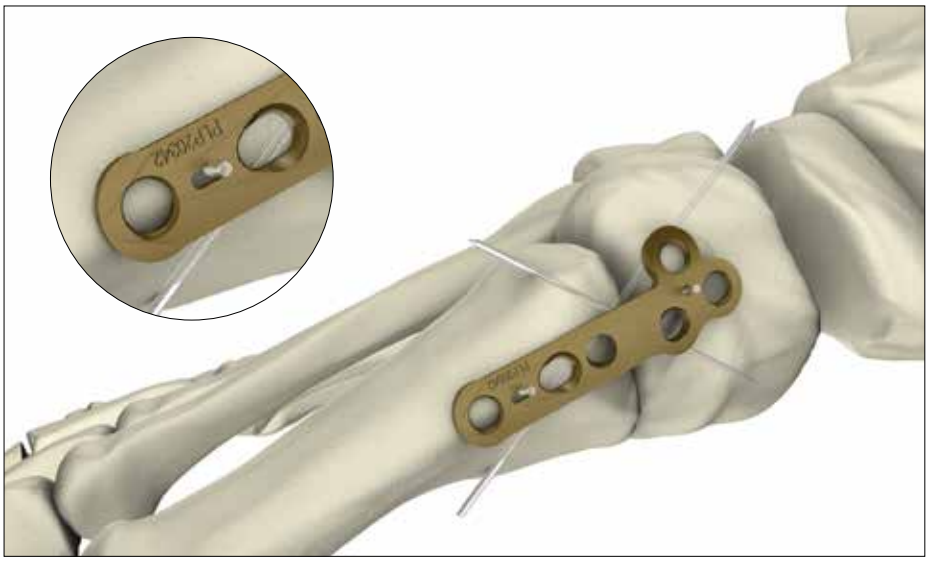


Lapidus Arthrodesis – Operative Technique

Plate Selection

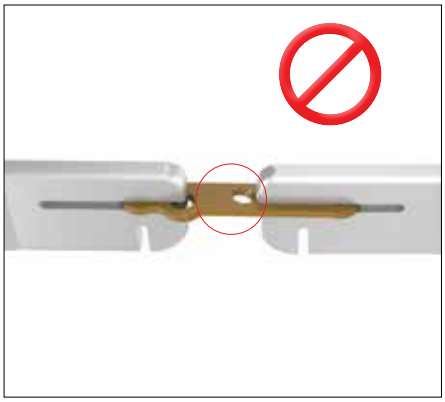
Choose the appropriate plate among the three step options according to the first metatarsal translation.

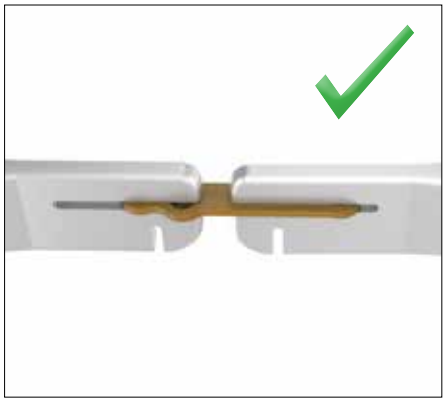
Position the plate over the joint and stabilize with temporary K-Wire 1.6mm x 150mm (AGK16150). The plate should be positioned flush against the metatarsal and cuneiform surfaces. If necessary use the plate benders (XCA001001) to adjust the plate shape to the patient anatomy.



⚠CAUTION

A temporary K-Wire 1.2mm x 70mm (AGK0212070) to anchor the plate to the metatarsal should be positioned distally within the slotted hole to accommodate the use of the compression ramp.

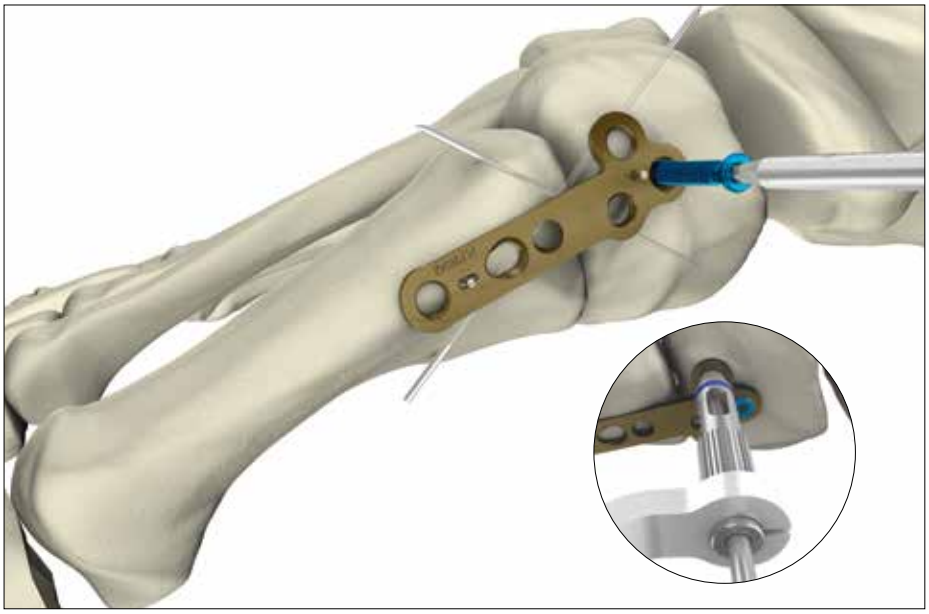




Proximal Screw Insertion

Perform drilling through locking or nonlocking drill guides according to the screw diameter preferred. All proximal holes can accommodate either locking or nonlocking screws in 3.0mm (blue) or 3.5mm (yellow) diameter.

A 2.0mm Drill Bit (XFO082001) (for 3.0 screws) or 2.5mm Drill (XFO082501) Bit (for 3.5mm screws) can be used in conjunction with the appropriate drill guide to prepare the hole for screw insertion. Insert screw after determining screw length with the Gauge (XJA002004).



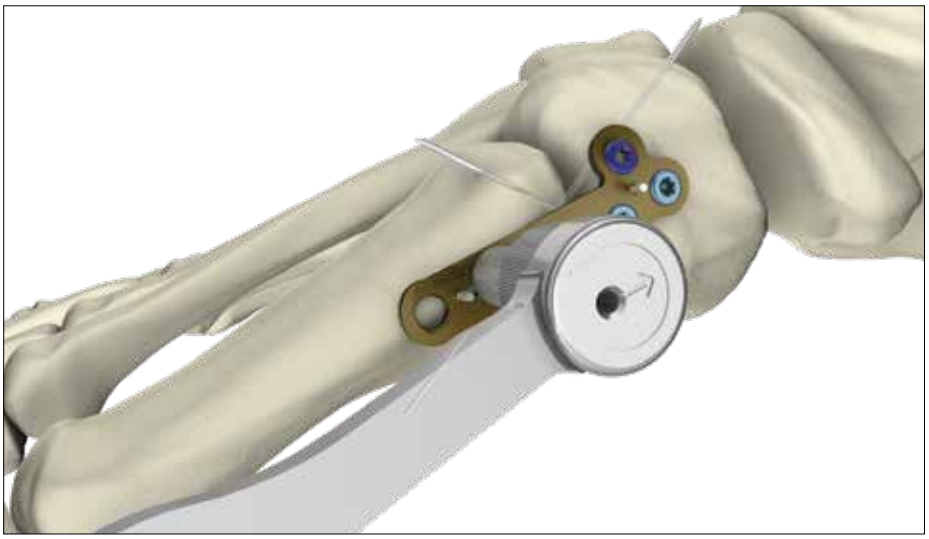
NOTICE

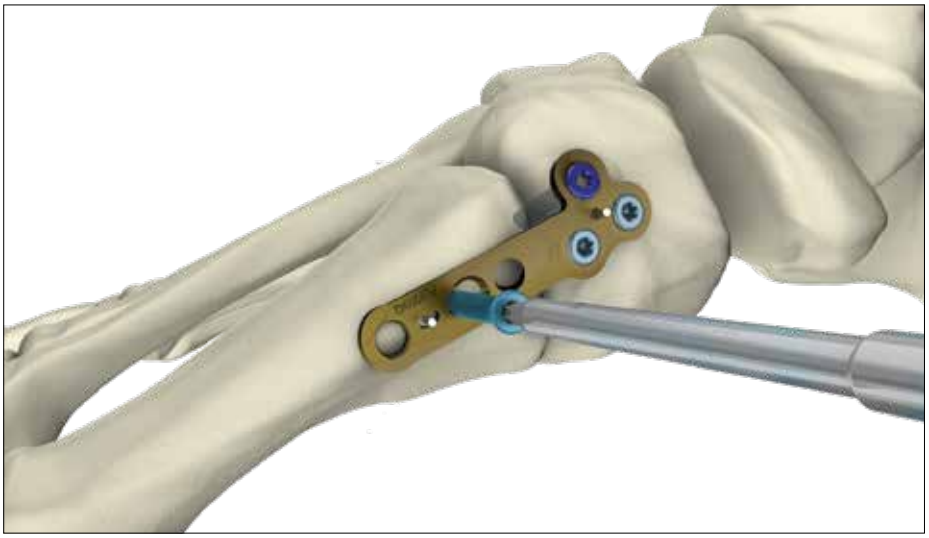
A nonlocking screw can be inserted prior to introduction of locking screws to flush the plate to the bone surface.

Lapidus Arthrodesis – Operative Technique

Compression Ramp

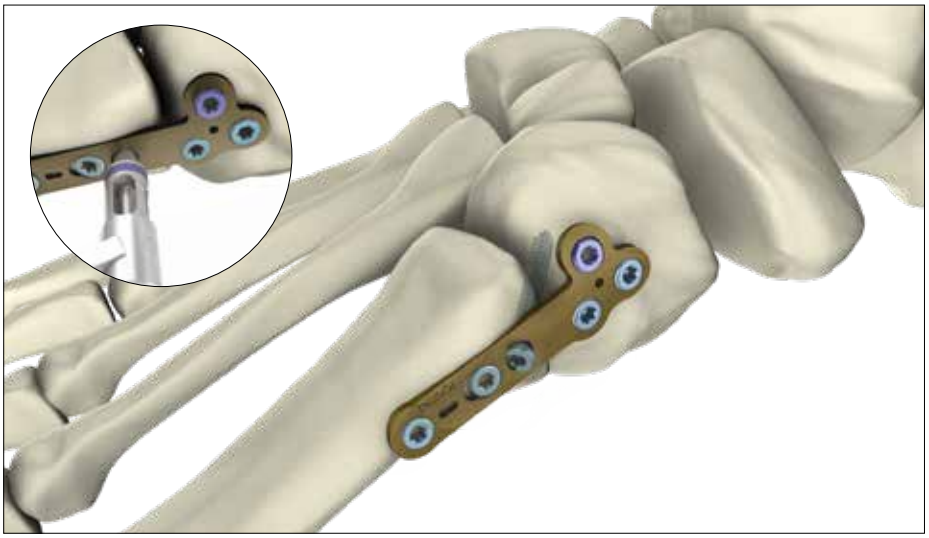
Following proximal screw insertion, the Compression Ramp (XVIMQ003020 + XVIMQ003021) can be used if compression is desired. Remove the K-Wires prior to tightening down the screw in the Compression Ramp. Refer to page 8 for Compression Ramp Technique.





Distal Screw Insertion

A 2.0mm Drill Bit (XFO082001) (for 3.0 screws) or 2.5mm Drill Bit (XFO082501) (for 3.5mm screws) can be used in conjunction with the appropriate drill guide to prepare the hole for screw insertion. Insert screw after determining screw length with the Gauge.



NOTICE

A nonlocking screw can be inserted prior to introduction of locking screws to flush the plate to the bone surface.

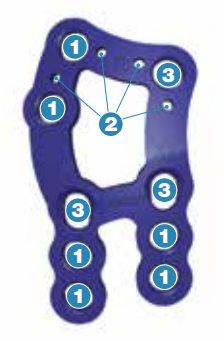
To stabilize the fusion construct, use a nonlocking drill guide and position an additional nonlocking screw (3.0mm) from the plantar aspect of the first metatarsal into medial cuneiform.

Anchorage Plating System

Lisfranc Arthrodesis – Operative Technique

The Anchorage Lisfranc Plate is available in Small, Medium and Large size to accommodate patient anatomies.

• Lisfranc Plate Profile: 1.5mm







1. Threaded Holes for Locking or NonLocking screws
2. Pin Fixation Holes
3. Compression Ramp

Incision

After the appropriate incision and joint preparation, reduce the fragments and temporarily fix using K-Wires 1.6mm x 150mm (AGK16150).

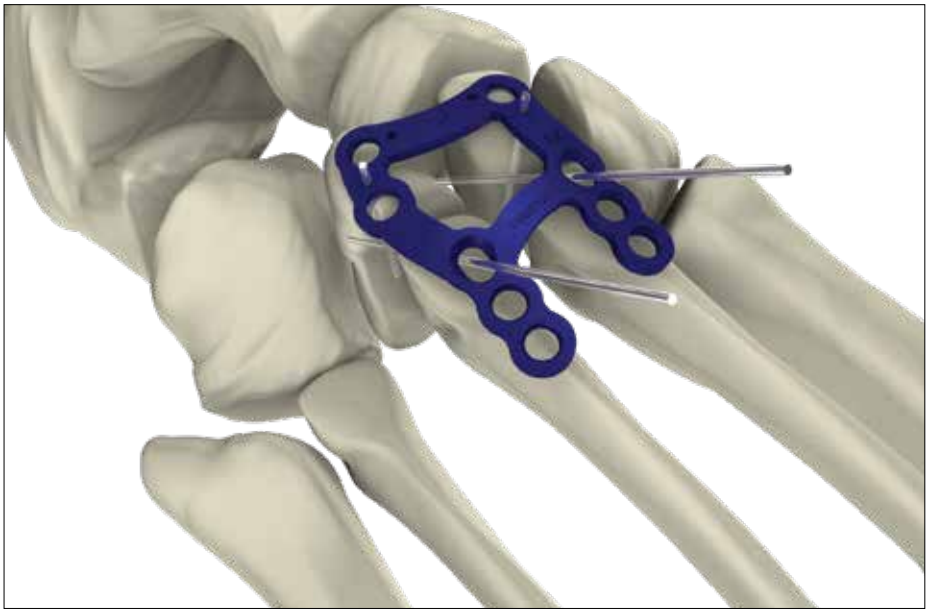


Plate Positioning

Position the plate and stabilize with temporary K-Wires 1.2mm x 70mm (AGK0212070) through small holes.

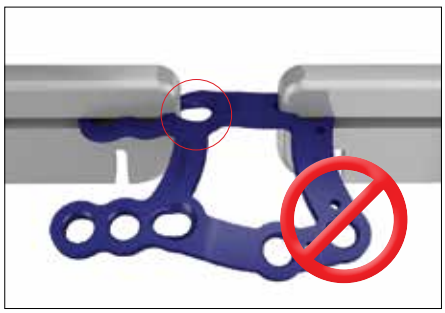
Plate Benders (XCA001001) can be used to bend the plate if necessary.

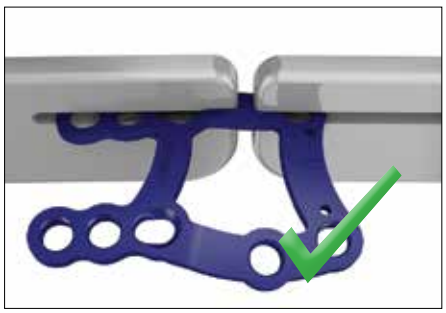
NOTICE

Additional temporary fixation in distal holes is recommended to mitigate risk of plate sliding.

⚠CAUTION

Ensure the threaded holes of the plate are not disrupted during bending technique. Plates should only be bent in one direction. Never re-bend plates.





Lisfranc Arthrodesis – Operative Technique

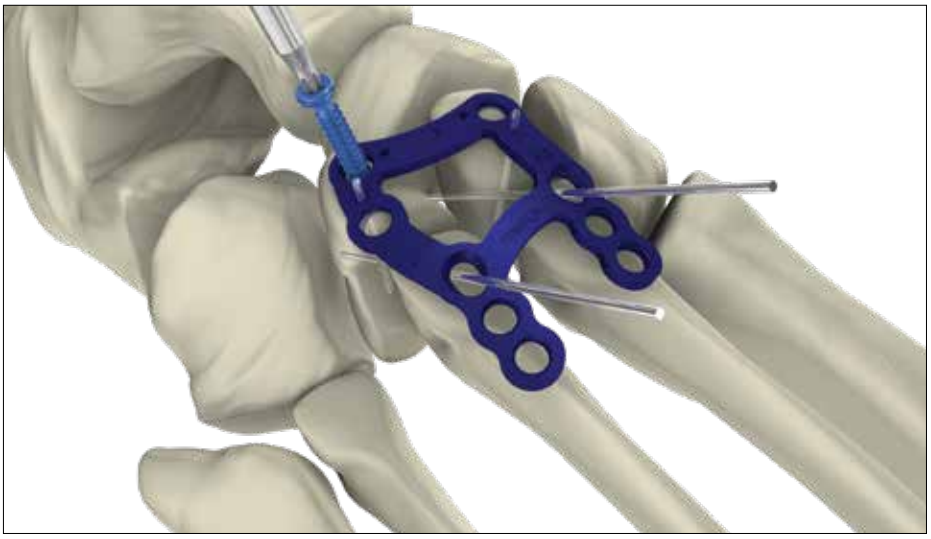
Proximal Screw Insertion

Perform drilling through locking and nonlocking drill guides according to the screw diameter preferred. All proximal holes can accommodate both locking and nonlocking screws in 3.0mm (blue) or 3.5mm (yellow) diameter.



Two nonlocking screws can be inserted to flush the plate to the bone surface.

A 2.0mm Drill Bit (XFO082001) (for 3.0mm screws) or 2.5mm Drill Bit (XFO082501) (for 3.5mm screws) can be used in conjunction with the appropriate drill guide to prepare the hole for screw insertion. Insert screw after determining screw length with the Gauge.



Lisfranc Arthrodesis – Operative Technique

Compression Ramp

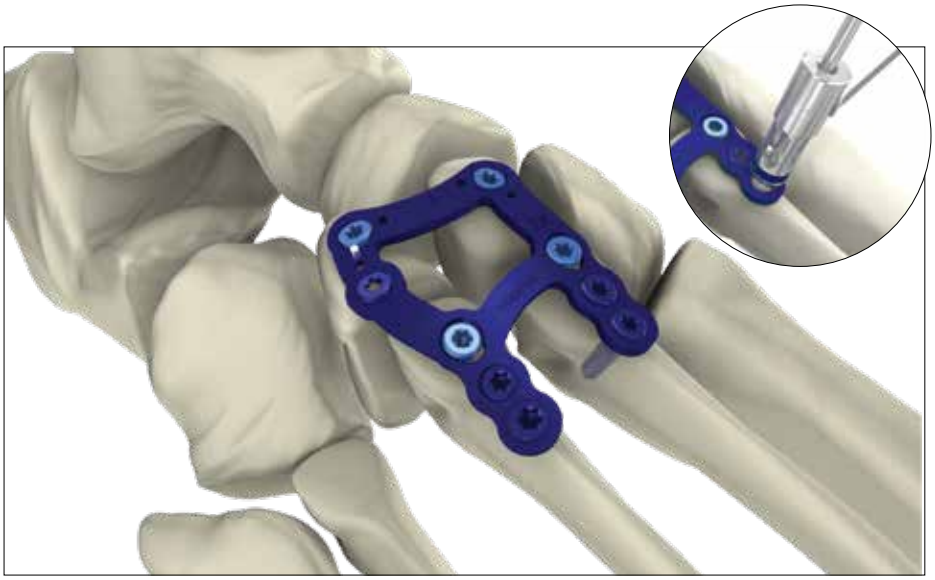
Following proximal screw insertion, the Compression Ramps can be used if compression is desired. Refer to page 8 for Compression Ramp Technique.





Distal Screw Insertion

Remove the temporary crossing K-Wires. A 2.0mm Drill Bit (XFO082001) (for 3.0mm screws) or 2.5mm Drill Bit (XFO082501) (for 3.5mm screws) can be used in conjunction with the appropriate drill guide to prepare the hole for screw insertion. Insert screw after determining screw length with the Gauge (XJA002004).



NOTICE

A nonlocking screw can be inserted prior to introduction of locking screws to flush the plate to the bone surface.

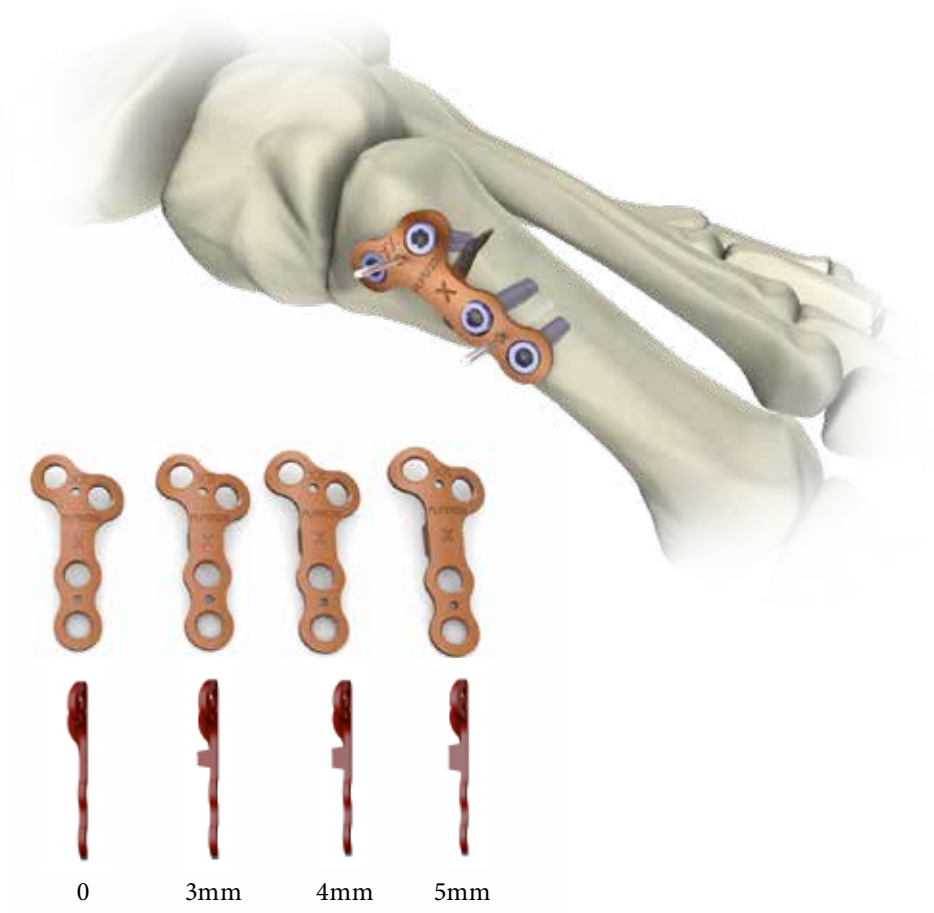
Surgical closure should be performed in a normal fashion.

Anchorage Plating System

Basal Osteotomy – Operative Technique

The Anchorage Basal Osteotomy Plates are available in 4 wedges options (0mm, 3mm, 4mm, 5mm) to ensure appropriate osteotomy correction.

- Basal Osteotomy Plate Profile: 1.0mm



Basal Osteotomy – Operative Technique

The most suitable angle of correction is identified on a preoperative X-Ray.



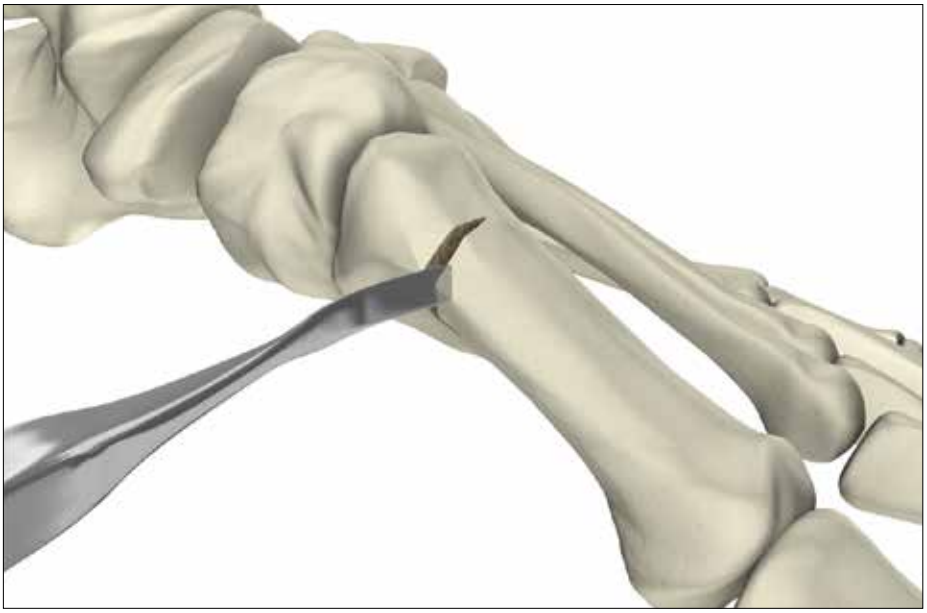
Approach

According to surgeon preference, one or two dorsal medial incisions are performed from the tarsometatarsal joint to the metatarsophalangeal joint taking care to retract all surrounding soft tissues.

Identify the location of the first metatarsal cuneiform joint directly or via fluoroscopy. A K-Wire should be used to indicate the reference point of the osteotomy via fluoroscopy.

Osteotomy

The osteotomy line is made in a medial to lateral direction, perpendicular to the metatarsal axis and approximately 10 – 15mm distally to the TMT joint with care not to penetrate the lateral cortex.



An osteotome can be utilized to open the osteotomy until the appropriate correction is reached. Care should be taken to preserve the lateral cortex.

Anchorage Plating System

Basal Osteotomy – Operative Technique

Plate Fixation

After plate identification, insert the wedge medially into the osteotomy and secure the plate with temporary K-Wires 1.2mm x 70mm (AGK0212070).



Plate Fixation

Perform drilling through locking or nonlocking drill guides according to the screw option desired. All proximal and distal holes can accommodate both locking and nonlocking screws in 3.0mm (blue) or 3.5 mm (yellow) diameter.

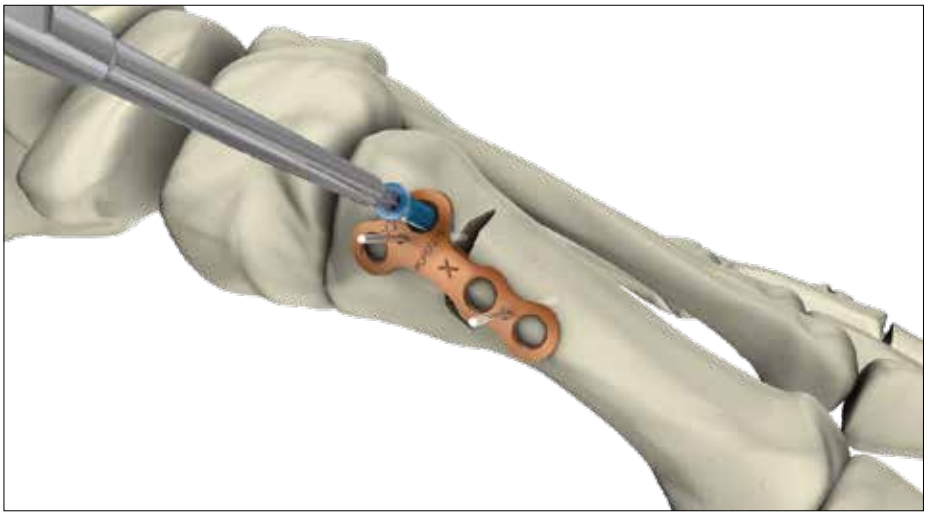
A 2.0mm Drill Bit (XFO082001) (for 3.0mm screws) or 2.5mm Drill Bit (XFO082501) (for 3.5mm screws) can be used in conjunction with the appropriate drill guide to prepare the hole for screw insertion. Insert screw after determining screw length with the Gauge.



NOTICE

A nonlocking screw can be inserted prior to introduction of locking screws to flush the plate to the bone surface.

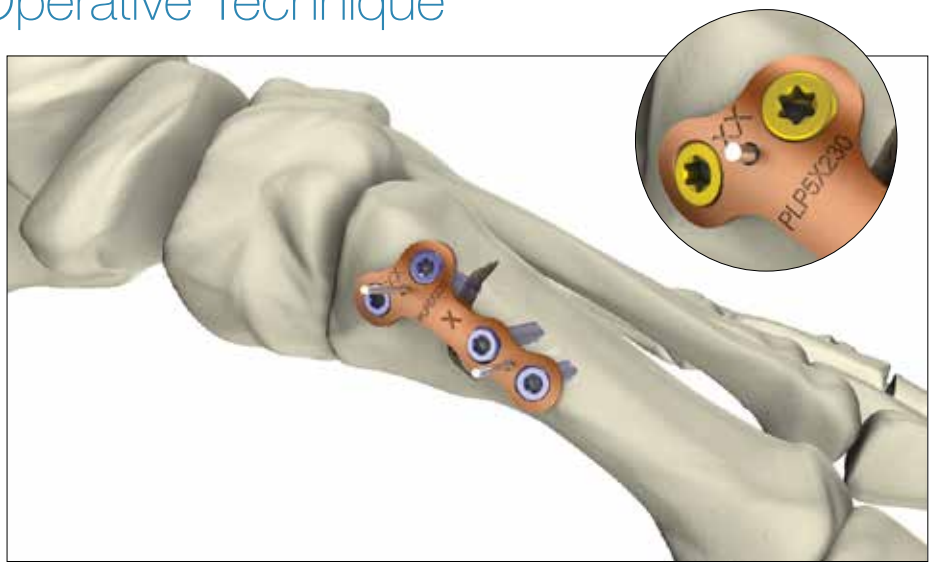
The Gauge (XJA002004) should be utilized to determine appropriate length screw to insert into the screw hole. Following measurement, the appropriate screw can be inserted.



Anchorage Plating System

Basal Osteotomy – Operative Technique

Locking or nonlocking screws can be inserted into the remaining holes following the same procedure for inserting proximal screws.



Anchorage Cross Plate System

Mechanically Generated, Cross Joint Compression

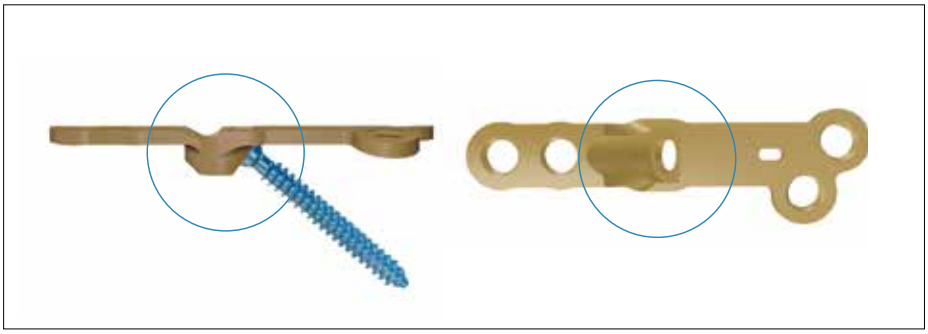
The Anchorage Cross Plates (CP) use an inset diagonal, cross-joint screw to develop mechanical compression across the fusion site. This approach minimizes the need for separate, independent stabilization and is designed to create compression.

All Anchorage CP Plates include:

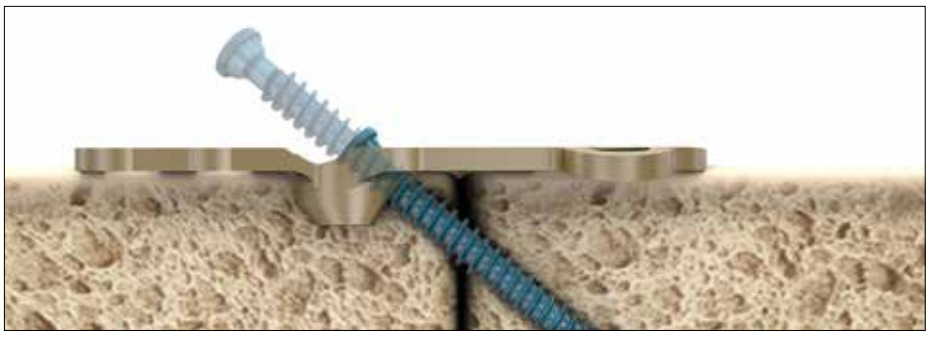
- Oblique screw design which offers an immediate stable construct
- Low profile design
- Cannulated instrumentation which helps promote surgical efficiency



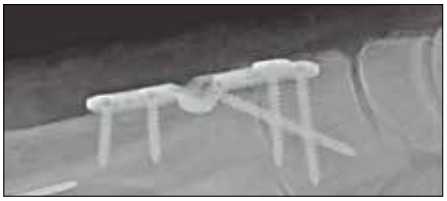
The CP plate concept was designed to allow maximum transmission of compression force across the joint, without the risk of the head of the screw fracturing the cortex and thus losing stability. By creating a recess for the counterbore in the plate it allows positioning of a compression screw through the plate. By first fixing the plate to the bone the force of compression is borne by the plate and screw as the compression screw is set. This allows maximum compression to be placed through the screw without risk of cortical fracture. This combination affords the compression of lag screw fixation combined with the stability of plate fixation.



The Cross Joint Counterbore accomodates only nonLocking Screws (3 or 3.5 mm).



Anchorage CP System Plates feature built-in, cross joint fixation with compression to simplify the surgical procedure and minimize the need for a separate, independent transverse screw.





Anchorage Cross Plate System

Instrumentation

The CP Instrumentation is designed for utilization with the Counterbore oblique holes of the CP plates. Distal and proximal screw insertion are performed with standard Anchorage instrumentation.

⚠CAUTION

Do not use the Plate Bender (XCA001001) with the Cross Plate System.



Anchorage CP Lapidus Plate

The Lapidus CP Plate is accompanied by a matching Location Template (XFA008701) that attaches to the CP 1.2mm K-Wire Guide (XVIMQ001012). The Lapidus Counterbore Drill Guide (XVIMQ004025) is asymmetric with a cylindrical, convex surface that corresponds to the matching concave surface of the Lapidus Plate.

Anchorage CP MTP Plate

The MTP Plate is also accompanied by a matching a Location Template (XFA008711) that attaches to the K-Wire Drill Guide (XVIMQ001012). The MTP Counterbore Drill Guide (XVIMQ005025) is cylindrical, with a flat edge that corresponds to the matching indentation on the MTP Plate.



Lapidus CP Template with K-Wire Guide



Lapidus CP Counterbore Drill Guide



MTP CP Template with K-Wire Guide



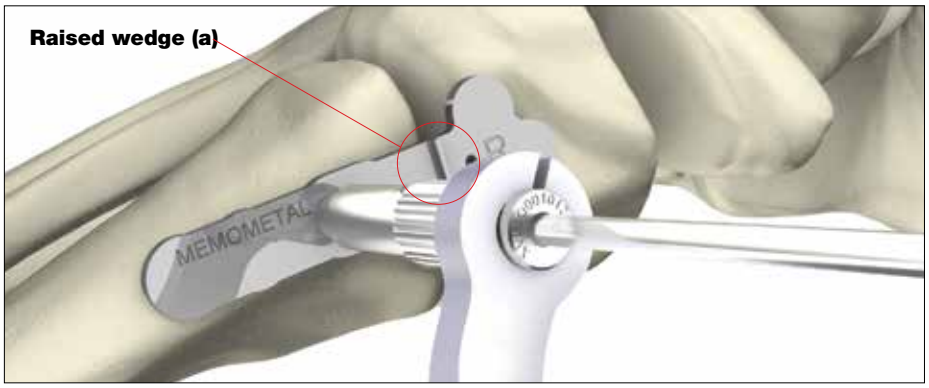
MTP CP Counterbore Drill Guide

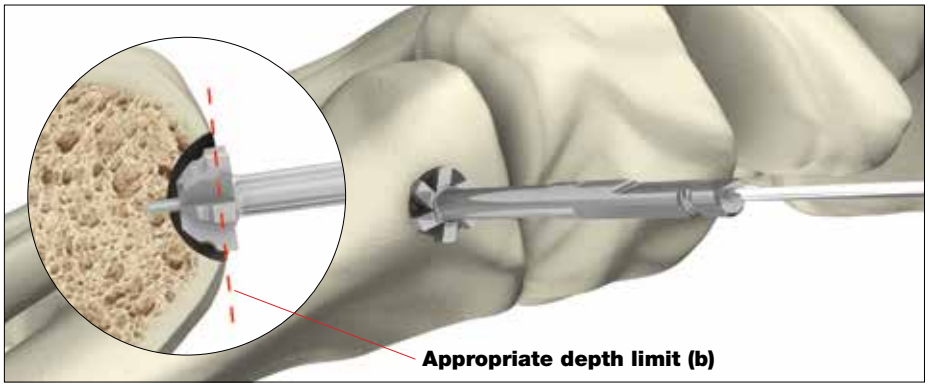
Lapidus Arthrodesis – Operative Technique

CP Preparation

Incision and temporary reduction can be achieved using standard procedure (refer to page 14). Once temporarily fixed, the 1.2mm K-Wire (AGK0212070) is inserted into the 1.2mm K-Wire guide and is attached to the Lapidus CP Template (XFA008701). The 1.2mm K-Wire guide (XVIMQ001012) can be attached to the white Drill Guide Handle or independently used as a joystick to position the template over the joint. The template should be positioned with the raised wedge (a) directly over the joint line. Once position is verified, a 1.2mm K-Wire is advanced through the drill guide and into the metatarsal. The template and drill guide are removed leaving the 1.2mm K-Wire. The CP Reamer (XFR006100) is advanced over the K-Wire to the appropriate depth limit (b). The reamer should not penetrate below the cortex of the bone.

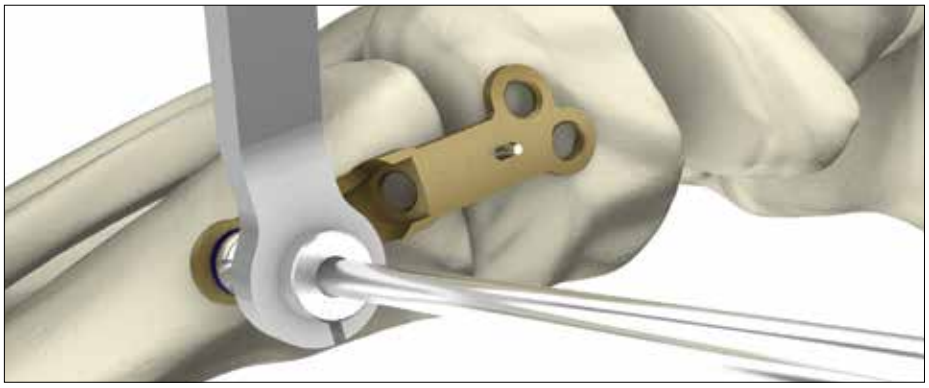
Once CP reaming is complete, the guide pin is removed and the CP plate is positioned and held in place with temporary fixation (AGK0212070).





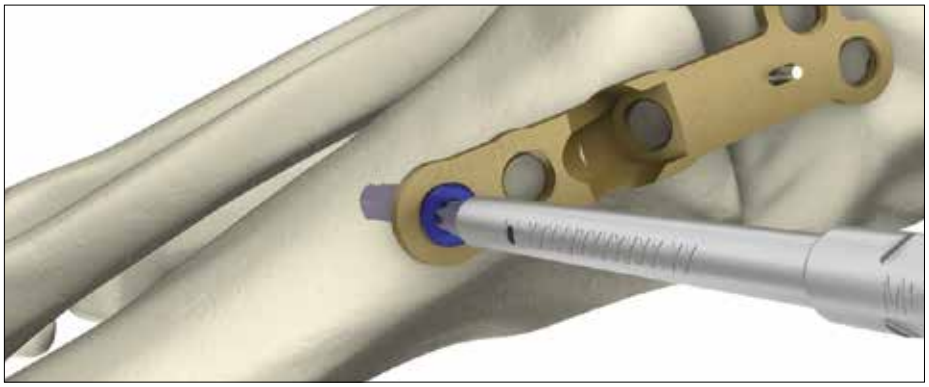
Distal Screw Insertion

A 2.0mm Drill Bit (XFO082001) (for 3.0 screws) or 2.5mm Drill Bit (XFO082501) (for 3.5mm screws) can be used in conjunction with the appropriate drill guide to prepare the hole for screw insertion. Insert distal screws after determining screw length with the Gauge (XJA002004).



NOTICE

A nonlocking screw can be inserted prior to introduction of locking screws to flush the plate to the bone surface.



⚠CAUTION

All threaded holes accommodate either locking or nonlocking screws (3.0mm and 3.5mm). Only nonlocking screws can be used in the Counterbore.

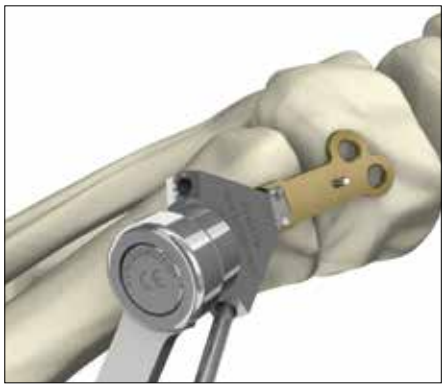
Lapidus Arthrodesis – Operative Technique

CP Preparation Continued

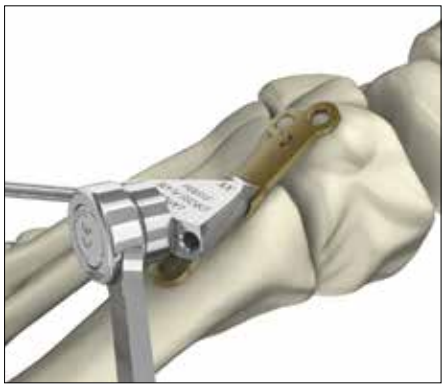
The CP Lapidus Drill Guide (XVIMQ004025) is positioned over the cross joint hole.

⚠CAUTION

The Lapidus CP Drill Guide should be positioned with laser markings on flat surface facing outward from the plate.



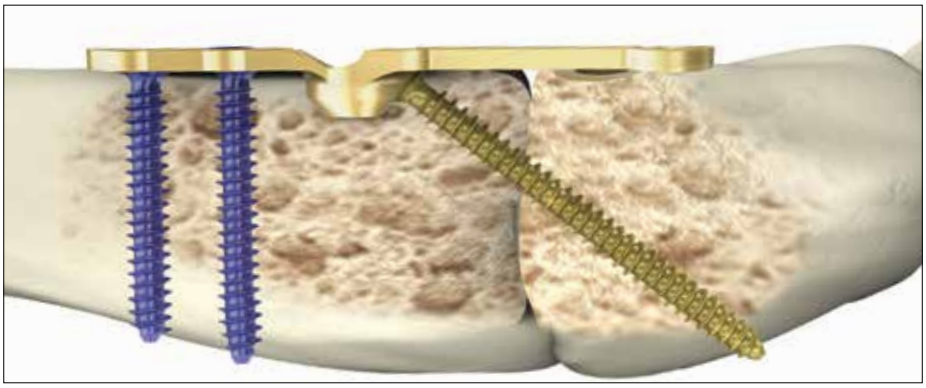
Medial Positioning



Dorsal Positioning

Depending on the plate positioning (dorsal or medial), the bone quality and the patient anatomy, drilling can be performed across one of the two drill guide holes. Use a 2.0mm Drill Bit (XFO082001) to accommodate a 3.0mm screw or a 2.5mm Drill Bit (XFO082501) to accomodate a 3.5mm screw.

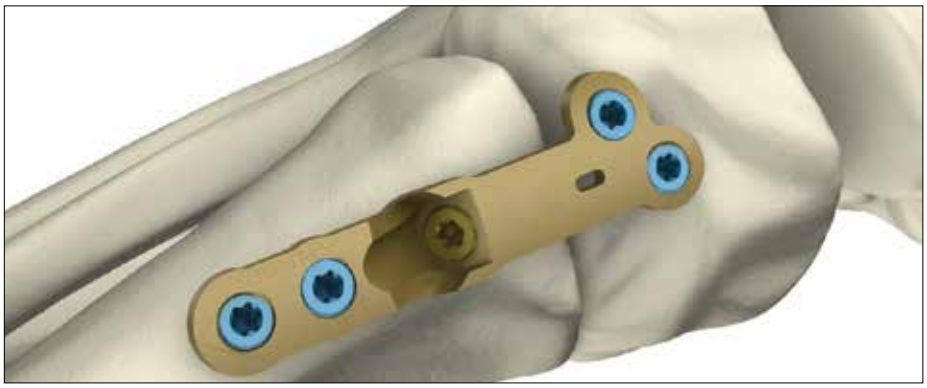
Remove Lapidus CP Drill Guide.



Cross Joint Screw

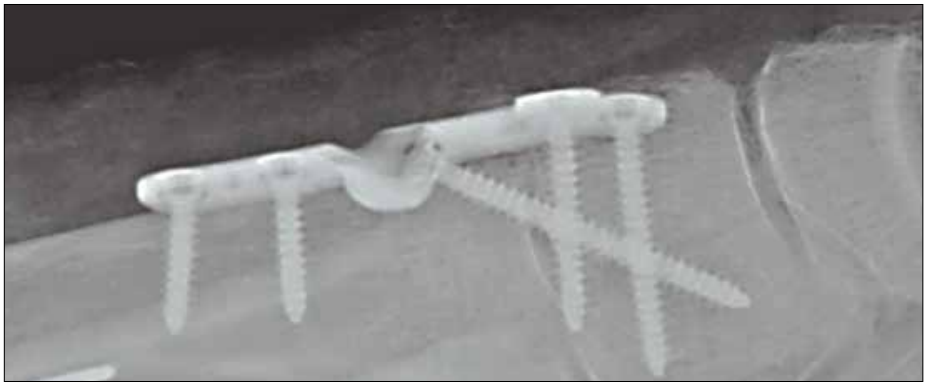
Use Gauge (XJA002004) to measure appropriate length screw for insertion. Once measured, all temporary fixation is removed and the appropriate nonlocking screw is placed through the CP hole.

As screw seats in the Counterbore of the plate, additional tightening develops compression across the joint with lag effect.



Proximal Screw Insertion

Insert remaining proximal screws and position under fluoroscopy.



Anchorage Cross Plate System

MTP Arthrodesis – Operative Technique

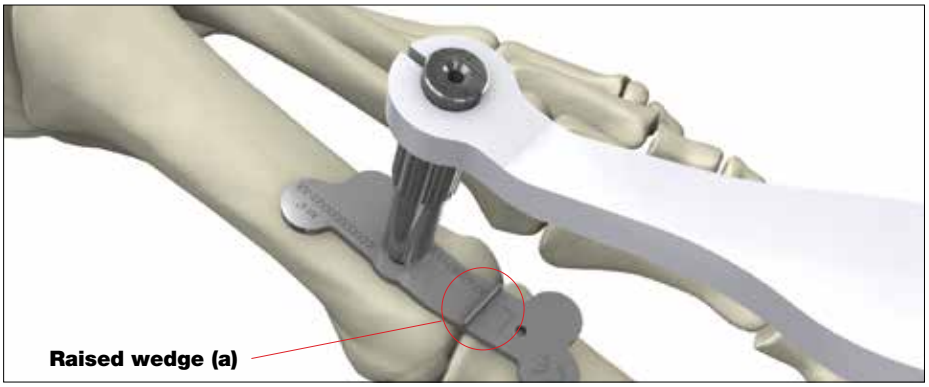
Preparation

The first MTP joint is prepared using flat cuts technique or the provided cup and cone reamers (XFR0042XX & XFR0041XX) within the Anchorage instrument set (Refer to page 10 for MTP exposure). Once prepared, the cup and cone surfaces can be aligned into desired position and temporarily stabilized using a guide wire.

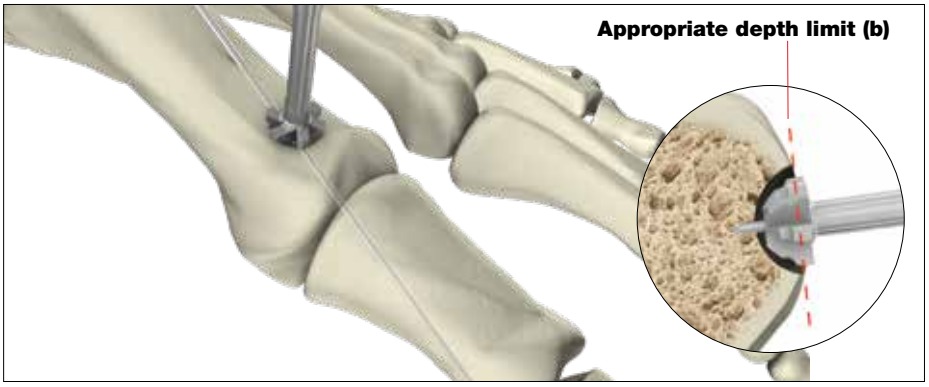


CP Plate Positioning

The MTP CP Template is oriented either R or L. The CP 1.2mm K-Wire guide (XVIMQ001012) is screwed into the template and is positioned over the MTP joint. Proper position has been achieved when the raised wedge (a) on the MTP CP Template is directly over the joint line. A 1.2mm K-Wire (AGK0212070) is inserted through the K-Wire guide. Once the K-Wire is positioned, the drill guide and template are removed.



The CP reamer (XFR006100) is advanced over the K-Wire until the appropriate depth limit is achieved (b). The reamer should not penetrate below the cortex of the bone.



The plate is positioned and temporarily fixated 1.2mm x 70mm (AGK0212070). Once fixated, the proximal holes are drilled and filled with appropriate drill bit and screw.

⚠ CAUTION

All threaded holes accommodate either locking or nonlocking screws (3.0mm and 3.5mm). Only nonlocking screws can be used in the Counterbore.



Anchorage Cross Plate System

MTP Arthrodesis – Operative Technique

Cross Joint Screw

After proximal fixation is achieved, the CP MTP Drill Guide (XVIMQ005025) is positioned in the Counterbore. A 2.0mm Drill Bit(XFO082001) (for 3.0mm screw) or 2.5mm Drill Bit (XFO082501) (for 3.5mm screw) is used to drill to the plantar cortex of the proximal phalanx.

Use the Gauge (XJA002004) to measure the appropriate length nonlocking screw to be inserted.

Once appropriate length screw is measured, all temporary fixation is removed and the appropriate nonlocking screw is placed through the CP hole.

Alternatively, use the Polyaxial Cross Plate Drilling Bush (XVIMQ001045) when an alternate angle for the screw is desired. Repeat above steps.

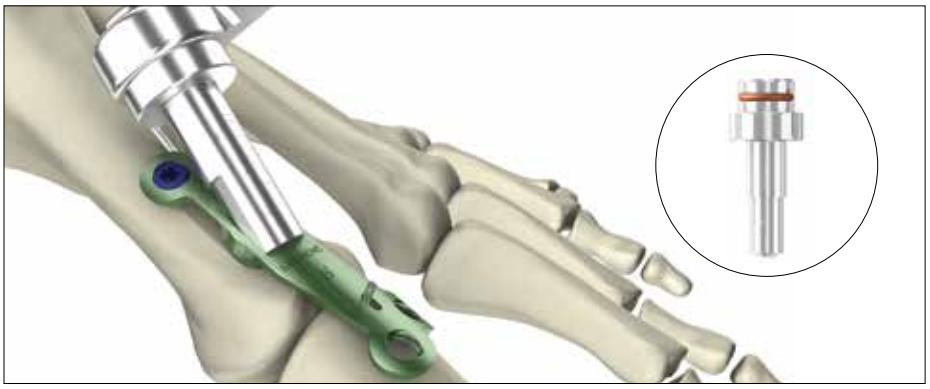
As screw seats in plate, additional tightening develops compression across the joint with lag effect.

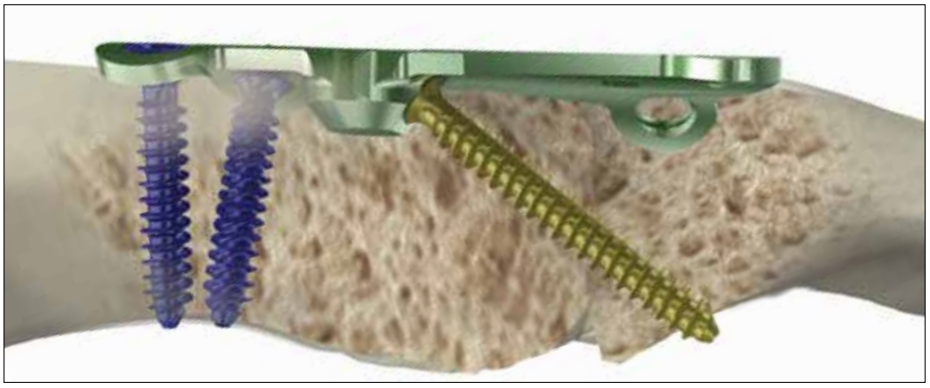
Distal Screw Insertion

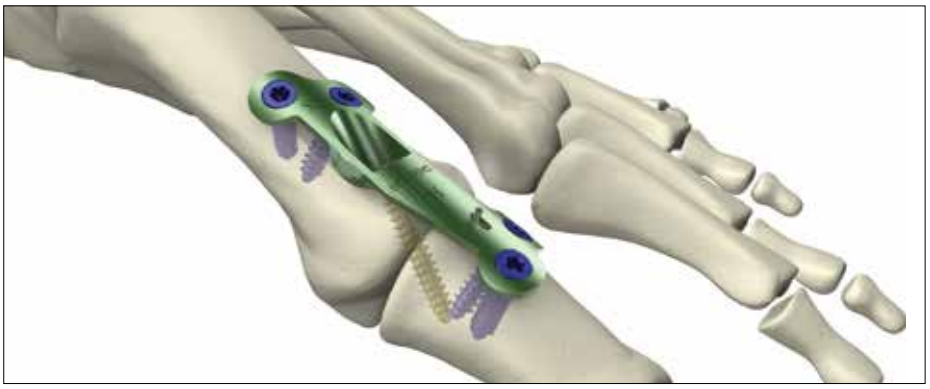
Once compressed, the remaining distal screws can be inserted and verified with X-Ray.

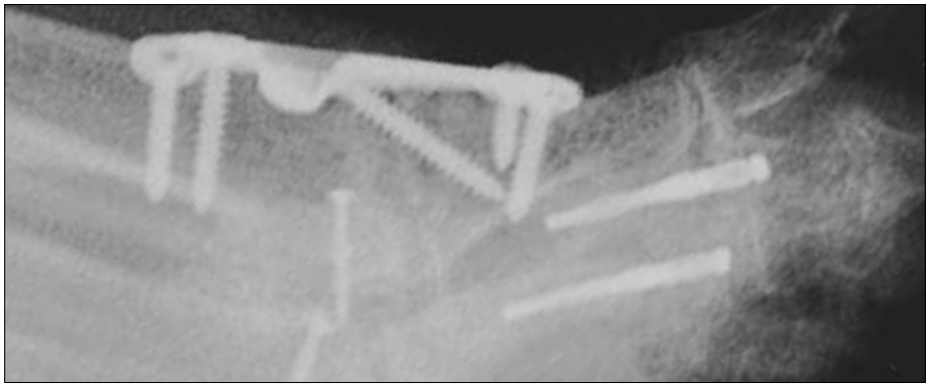
⚠CAUTION

To avoid any risk of contact with the cross joint screw, it is recommended to use a screw not longer than 12mm length.









Notes

Notes

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